

REMARKS

In response to the Office Action dated February 4, 2003, Applicants respectfully request reconsideration and withdrawal of the rejections and objections. The allowance of claims 35-39, 68 and 69, and the indication that claims 40, 43, 52 and 61 contain allowable subject matter, is noted with appreciation. In response thereto, original claims 43, 52 and 61 have been written in independent form, and are presented herein as new claims 70-72.

The drawings were objected to as not showing the features of the light valves, as recited in claims 11-13, for example. In response thereto, new figures 16a, 16b, 17a, 17b, 18a, 18b and 19a-19d are being submitted herewith, to illustrate the claimed subject matter. In addition, the specification is being amended to include references to these new figures. It is respectfully submitted that the added figures are fully supported by the original disclosure and claims, and therefore do not introduce new matter.

The specification was objected to, on the basis of a typographical error on page 8 and an incomplete sentence on page 12. In response thereto, replacement paragraphs are being submitted herewith, to correct these errors.

Claims 6, 10, 19, 28, 40, 44, 53 and 62 were rejected under the first paragraph of 35 U.S.C. § 112, in connection with their recitation of "an active matrix silicon backplane microdisplay." The Examiner questioned the basis for this term, and assumed that it refers to silicon backplane liquid crystal displays. To remove the grounds for the rejection, the affected claims have been amended to recite a "silicon backplane liquid crystal display."

Claims 14, 15, 23, 24, 32, 33, 48, 49, 57, 58, 66 and 67 were rejected under the first paragraph of 35 U.S.C. § 112 on the grounds that a person of ordinary skill in the projector art might not understand how to make the claimed light valves. Applicants respectfully traverse this ground of rejection. The incorporation of color filters onto LCD active matrix backplanes is routinely carried out in glass-based active matrix LCDs with thin film transistors. Such displays are produced in very large numbers. In the context of the present invention, the same technique can be applied to silicon backplane LCDs. It is respectfully submitted that a skilled person who understands the incorporation of color filters onto ordinary active matrix LCD backplanes would fully appreciate that it is also possible to do the same on silicon backplanes. A number of U.S. patents disclose technology that relates to the application of color filters onto active matrix backplanes. For example, the Examiner is referred to U.S. Patent No. 6,392,728. It is respectfully submitted that a skilled person in the relevant technology would not have any difficulty in understanding the subject matter of the rejected claims, nor how to implement such claims in practice. Reconsideration and withdrawal of the rejection is therefore respectfully requested.

Claims 1-4 were rejected under 35 U.S.C. § 102, on the grounds that they were considered to be anticipated by the Johnson et al patent, U.S. Patent No. 6,183,091. In addition, claims 5-7 were rejected as being unpatentable over the Johnson et al patent, either by itself or in combination with other references. To remove the issues under consideration and expedite prosecution, claims 1-7 have been canceled.

Claims 8-10, 17-19 and 26-28 were rejected under 35 U.S.C. § 103, on the grounds that they were considered to be unpatentable over the Robinson et al patent publication. In addition, claims 11-13, 20-22 and 29-31 were rejected over the Robinson publication in view of the Owen et al patent, and claims 16, 25, 34, 41, 42, 44-47, 50, 51, 53-56, 59, 60 and 62-65 were rejected as being unpatentable over the Robinson and Owen publications in further view of the Hirose et al patent. To reduce the issues under consideration, claims 8, 17 and 26 have been amended to incorporate the subject matter of dependent claims 11, 20 and 29, respectively. Claims 41, 50 and 59 have been amended in a similar manner. It is respectfully submitted that the Robinson publication does not suggest the subject matter of these claims, whether considered individually or in combination with either or both of the Owen and Hirose patents.

While the Robinson and Owen publications disclose systems that utilize a reduced number of optical elements, the manner in which colors are generated in the systems of these references is quite different from the claimed subject matter. More particularly, they employ a technique known as a "sequential color scheme," in which the light source is pulsed in sequences of red, green and blue. These publications do not disclose the use of a color filter on the display. In the claimed invention, a white light source is used, and a pixilated color filter is provided on the display.

The Robinson publication does not disclose a pixilated color filter on the display. Rather, in the projection system of the Robinson publication, the same pixel will show red, green and blue colors in sequence, by sequencing a single light source. In the Owen

patent, there is no color filter provided on the pixels of the display. Again, in the system of that patent, the same pixel shows red, green and blue in time sequence, with the light source being sequenced by using an active color filter. The Owen patent differs from the Robinson publication, in that not all pixels are turned on at the same time, which avoids the problem of color breakup. However, neither reference teaches the use of a pixilated color filter on a display, as in the claimed invention.

Furthermore, it is respectfully submitted that the Hirose patent does not contain any disclosure that overcomes this distinction between the claimed subject matter and the teachings of the Robinson and Owen publications.

Reconsideration and withdrawal of the rejections, and allowance of all pending claims are therefore respectfully requested.

Respectfully submitted,

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AMENDMENTS TO THE DRAWINGS:

The attached sheets of drawings include new Figures 16a, 16b, 17a, 17b, 18a, 18b and 19a-19d.

Attachments: 2 Additional Sheets of Drawings